Bruce a
42045-00070

Monroe Energy, LLC
4101 Post Road
Trainer, PA 19061
(610) 364-8000

September 1, 2015

Mr. James Rebarchak
Commonwealth of Pennsylvania
Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Re: Monroe Energy, LLC – Trainer Refinery
40 CFR 63, Subpart CC: Semi-Annual Report
Reporting Period: January 16, 2015 - July 15, 2015

Mr. Rebarchak:

In accordance with 40 CFR 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, section 63.655(g), the Monroe Energy Trainer Refinery hereby submits this Semi-Annual MACT CC Report for the reporting period of January 16, 2015 through July 15, 2015.

Please note that this report does not contain any information that Monroe Energy has determined to be Confidential Business Information (CBI); therefore, the attached report has been marked "Public Copy" and no information has been redacted.

Subject to the penalties of Title 18 Pa. C.S. Section 4904 and 35 P.S. Section 4009 (b) (2), I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this form are true, accurate, and complete.

Should you have any questions or comments regarding this report, please contact Stephani Ski Szymanski, Environmental Engineer, at (610) 364-8073 or Matt Torell, Environmental Leader, at (610) 364-8399.

Sincerely,
MONROE ENERGY, LLC

Jeffrey K. Warmann
CEO & President

Encl: 1H2015 MACT CC Report [Public Copy]

Cc: U.S. EPA, Region III
Office of Air Enforcement & Compliance Assistance
Mail Code 3AP20
1650 Arch Street
Philadelphia, PA 19103-2029

MONROE ENERGY, LLC
TRAINER REFNERY
SEMIANNUAL REPORT
JANUARY 16, 2015 – JULY 15, 2015

The Refinery MACT emission standards (40 CFR 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries) regulate the following refinery equipment and operations:

1. Miscellaneous Process Vents.
2. Storage Vessels.
3. Wastewater Treatment Operations.
4. Fugitive Emissions.
5. Gasoline Loading Racks.
6. Marine Loading Facilities (if contiguous to the refinery).
7. Heat Exchanger Systems.
8. Startups, Shutdowns, and Malfunctions.

This semiannual report addresses the status of facility compliance with Subpart CC.

COMPLIANCE STATUS: 40 CFR 63, SUBPART CC

1. Miscellaneous process vents: [§63. 643-645]

The Trainer Refinery has only one "Group 1 miscellaneous process vent." The vent is located in the Alky Pretreat Unit and is designated as the "Oxidizer Disulfide Separator Vent" (Source ID 129) in the refinery's Title V Operating Permit (TVOP). The vent does not have a bypass and is directly routed to the FCC CO Boiler where product is introduced into the flame zone for destruction.

2. Storage vessels: [§63.646]

Inspection of storage tanks that are subject to the Refinery MACT regulations have been conducted in accordance with applicable requirements. No seal gap failures were observed for the tanks inspected during this reporting period.

There were no new primary seals and secondary seals installed during this reporting period.

Spheroid Tanks 501 and 502 comply with Subpart CC by venting to a closed loop system that is routed to the Main Flare. Spheroid Tank 513 is vented to the refinery's fuel gas system, via the refinery's "Low Line". Spheroid tanks are maintained under pressure and only vent as needed via pressure control valves. No venting to the atmosphere occurred during this reporting period.

No storage tanks were reclassified from Group 1 to Group 2, or Group 2 to Group 1, during the reporting period.

3. Wastewater Provisions: [§63.647]

Pursuant to 40 CFR §63.647, the Trainer Refinery complies with ~~the~~ Wastewater Provisions of 40 CFR 63, Subpart CC by complying with 40 CFR 61, Subpart FF,

Benzene Waste Operations NESHAP (BWON). All BWON reports are submitted to U.S. EPA and PADEP under separate cover, pursuant to the BWON regulations.

4. **Equipment Leak Standards:** **[§63.648]**

Periodic equipment leak reports are submitted quarterly and semi-annually under separate cover in accordance with §63.10(a)(6) and §63.655(d).

5. **Gasoline Loading Rack Provisions:** **[§63.650]**

There is no gasoline loading rack present at the Trainer Refinery. Therefore, the provisions of §63.650 do not apply.

6. **Marine Tank Vessel Loading Operation Provisions:** **[§63.651]**

The Marine Tank Vessel Loading Operations present at the Trainer Refinery are not subject to 40 CFR §63.651.

7. **Heat Exchange Systems:** **[§63.654]**

The Trainer Refinery is subject to the heat exchanger systems requirements that became effective in October 2012. The information required pursuant to §63.655(g)(9) is summarized in Tables 1, 2, and 3 below:

8. **Startup, Shutdown, and Malfunction Plans (SSMP):** **[§63.10(d)(5)]**

All startups, shutdowns, and malfunctions of equipment regulated by 40 CFR 63, Subpart CC which occurred during the reporting period were managed consistent with the facility's SSMP.

Table 1: §63.655(g)(9) Data Request Questions

The number of heat exchange systems in HAP service as of the close of the Reporting Period:	5
The number of heat exchange systems in HAP service found to be leaking:	1
A summary of the monitoring data that indicate a leak, including the number of leaks determined to be equal to or greater than the leak definitions specified in §63.654(c)(2):	See Table 2
If applicable, the date a leak was identified, the date the source of the leak was identified, and the date of repair:	See Table 2
If applicable, a summary of each delay of repair (DOR), including the original date and reason for the delay and the date of repair, if repaired during the reporting period:	**Stony Creek Guard Basin (SCGB) Exchanger System** **1. Sample Point SCGB-03 - Heavy Cat Naptha (HCN) Product Cooler (Chester Side); PV-1741** January 22, 2015: Monthly monitoring result of 10.42 ppm. February 26, 2015: Exchanger was re-monitored after repair attempt(s) were made. Monitoring result was 8.70 ppm and Exchanger was placed on Delay of Repair (DOR). March 26, 2015: Exchanger bundle was blocked in, placed Out of Service (OOS), and awaited repair. April 23, 2015: Exchanger bundle replaced back in service. April 27, 2015: Exchanger monitored. Result 0.58ppm. Exchanger was successfully repaired and removed from Delay of Repair. **2. Sample Point SCGB-07 - Kero Cold High Pressure Separator; PV-1728** May 30, 2014, Exchanger was placed on DOR (as was reported and documented in Semi Annual July 16 - January 14, 2014 Report) April 2015: Repairs to Exchanger were scheduled and performed during Shutdown of the Kero Unit to perform maintenance and repairs on the HCN Feed Filters. April 23, 2015: Exchanger monitored. Result 3.05_ppm. Exchanger was successfully repaired and removed from Delay of Repair. NOTE: No exchangers are on DOR.
For estimate of potential hydrocarbon emissions for each delayed repair during reporting period:	Table 3

Table 2: Modified El Paso Monitoring Leak and Repair Summary

Monroe Energy - Modified El Paso Monitoring Leaks and Repairs Summary							
Sample Location	Sample Date	Sample Result (ppm)	Leak Trace	Leak Trace Reading (ppm)	Repair Date	Repair Verification Date	Repair Verification Reading (ppm)
SSCT-01	1/20/2015	23.00					
	1/20/2015		SSCT-B Header HAP Exchangers	41.84	*		
	1/20/2015		K1A-E2	1.5	No Repairs Necessary	HAP HX Not leaking	N/A
	1/20/2015		K1B-E2	1.22	No Repairs Necessary	HAP HX Not leaking	N/A
	1/20/2015		21-K6-E2	2.17	No Repairs Necessary	HAP HX Not leaking	N/A
	1/21/2015		21-E-28	1.62	No Repairs Necessary	HAP HX Not leaking	N/A
	1/21/2015		21-E-26	2.68	No Repairs Necessary	HAP HX Not leaking	N/A
	1/21/2015		21-E-12A+B	1.87	No Repairs Necessary	HAP HX Not leaking	N/A
SCGB-03	1/22/2015	10.42					
			HCN Product Cooler (Chester Side) PV-1741	8.70	2/26/2015	ON DOR/Next Scheduled Turn Around **	N/A
				N/A	3/26/2015	Out of Service and on DOR	N/A
				N/A	4/23/2015	Out of Service and ON DOR	N/A
				N/A	4/16/2015 - 4/23/2015	Period to Replace Bundle	N/A
				N/A	4//23/2015	Replacement of Bundle Completed	N/A
				N/A	4/27/2015	Repaired and Removed from DOR	0.58
SSCT-01	2/23/2015	29.76					
			SSCT-B Header HAP Exchangers:	56.90	*		
	2/24/2015		K1A-E2	1.53	No Repairs Necessary	HAP HX Not leaking	N/A
	2/24/2015		K1B-E2	1.73	No Repairs Necessary	HAP HX Not leaking	N/A
	2/24/2015		21-K6-E2	1.81	No Repairs Necessary	HAP HX Not leaking	N/A
	2/23/2015		21-E-28	4.02	No Repairs Necessary	HAP HX Not leaking	N/A
	2/23/2015		21-E-26	5.19	No Repairs Necessary	HAP HX Not leaking	N/A
	2/23/2015		21-E-12A+B	4.17	No Repairs Necessary	HAP HX Not leaking	N/A

* Traced >6.2 ppm readings to Exchanger Bank Header. All MACT CC Applicable HAP Exchangers associated with Bank header were monitored. Monitoring results for all exchangers were <6.2 leak action level. No repairs were required.

** Table 1: Delay of Repair (DOR) Summary Section. If monitoring result is >62ppm, 30 Day window for tracing and full repair of leaking Exchanger(s) will be activated.

*** Bottle Test for VHAP performed. Reason: Exchangers are located >50' on platform deck and transport of Air Stripper up platform steps is unsafe.

SSCT-01	3/24/2015	28.04					
	3/24/2015		SSCT-B Header HAP Exchangers:	41.39	*		
	3/25/2015		K1A-E2	0.74	No Repairs Necessary	HAP HX Not leaking	N/A
	3/25/2015		K1B-E2	1.03	No Repairs Necessary	HAP HX Not leaking	N/A
	3/25/2015		21-K6-E2	1.32	No Repairs Necessary	HAP HX Not leaking	N/A
	3/25/2015		21-E-28	3.86	No Repairs Necessary	HAP HX Not leaking	N/A
	3/25/2015		21-E-26	0.13	No Repairs Necessary	HAP HX Not leaking	N/A
	3/25/2015		21-E-12A+B	0.28	No Repairs Necessary	HAP HX Not leaking	N/A
SSCT-01	4/24/2005	17.27					
	4/27/2015		SSCT-B Header HAP Exchangers:	37.13	*		
	4/27/2015		K1A-E2	0.83	No Repairs Necessary	HAP HX Not leaking	N/A
	4/27/2015		K1B-E2	0.94	No Repairs Necessary	HAP HX Not leaking	N/A
	4/27/2015		21-K6-E2	1.32	No Repairs Necessary	HAP HX Not leaking	N/A
	4/27/2015		21-E-28	1.31	No Repairs Necessary	HAP HX Not leaking	N/A
	4/27/2015		21-E-26	0.32	No Repairs Necessary	HAP HX Not leaking	N/A
	4/27/2015		21-E-12A+B	0.20	No Repairs Necessary	HAP HX Not leaking	N/A
SCGB-B	2/04/2015	30.94					
	2/04/2015		PV-2411/2033	5.00***			
	2/04/2015		PV-2412/2400	4.00***			
	2/04/2015		PV-2413/2087/ 544 0verhead Condenser MH side next to Stairwell	600.00***			
					3/9/2015	Isolation Blinds Installed on bundles/Bundles Out of Service	N/A
					3/16/2015	New Bundles in place	N/A
					3/24/2015	Isolation Blinds Removed. Exchangers placed back into Service	N/A
	3/26/2015		SCGB-B Common Line	N/A	3/24/2015	3/26/2015	2.67
SCGB-07	1/22/2015	4.42	Kero Cold High Pressure Separator/ PV-1728	N/A		ON DOR/Next Scheduled Turn Around **	N/A
SCGB-07	2/24/2015	17.92	Kero Cold High Pressure Separator/ PV-1728	N/A		ON DOR/Next Scheduled Turn Around **	N/A

* Traced >6.2 ppm readings to Exchanger Bank Header. All MACT CC Applicable HAP Exchangers associated with Bank header were monitored. Monitoring results for all exchangers were <6.2 leak action level. No repairs were required.

** Table 1: Delay of Repair (DOR) Summary Section. If monitoring result is >62ppm, 30 Day window for tracing and full repair of leaking Exchanger(s) will be activated.

*** Bottle Test for VHAP performed. Reason: Exchangers are located >50' on platform deck and transport of Air Stripper up platform steps is unsafe.

	3/26/2015	15.72	Kero Cold High Pressure Separator/ PV-1728	N/A		ON DOR/Next Scheduled Turn Around **	N/A
			Kero Cold High Pressure Separator/ PV-1728	N/A	4/15/2015	Repairs of Leaking Exchangers where conducted during Kero Shutdown period	N/A
	4/23/2015	3.05	Kero Cold High Pressure Separator/ PV-1728	N/A	Repaired and Removed from DOR	N/A	N/A

* Traced >6.2 ppm readings to Exchanger Bank Header. All MACT CC Applicable HAP Exchangers associated with Bank header were monitored. Monitoring results for all exchangers were <6.2 leak action level. No repairs were required.

** Table 1: Delay of Repair (DOR) Summary Section. If monitoring result is >62ppm, 30 Day window for tracing and full repair of leaking Exchanger(s) will be activated.

*** Bottle Test for VHAP performed. Reason: Exchangers are located >50' on platform deck and transport of Air Stripper up platform steps is unsafe.

Table 3: Estimate of the Potential Hydrocarbon Emissions for each Delay of Repair (DOR)

Estimate of the Potential Hydrocarbon Emissions for each DOR

Using Equation 7-1 form Appendix P Cooling Tower Monitoring

Monthly Sample Location	Monthly Sample Date	a. Water Flow (ml/min)	b. Air Flow (ml/min)	c. Monthly Sample Result (ppm)	M. Molecular Weight of Methane (g/mol)	P. Pressure (Hg)	R. Conversion Factor (ml-atm/mol-K)	T. Stripping Chamber Temp (Deg C)	C. Concentration of air strippable compound (ppmw)	F. Mass Flow Rate of the Cooling Water (gal/min)	Duration of Delay of Repair (hours)	Equation 7-2 Mass Emission rate of VOCs, (lb/hr)	Total Estimated VOC Emissions in the DOR period (lbs)
SCGB-03	1/22/2015	125	2500	10.42	16.04	30.25	82.054	5.60	0.148	919	840	0.0680	57
SCGB-03	2/26/2015	125	2500	8.7	16.04	29.98	82.054	6.20	0.122	919	672	0.0561	38
SCGB-03	3/26/2015	125	2500	out of service									
SCGB-03	4/23/2015	125	2500	repaired and placed in service									
SCGB-03	4/27/2015	125	2500	0.58	16.04	29.80	82.054	25.40	0.008	919	552	0.0035	2
SCGB-03	5/20/2015												

Total estimated VOC emissions for the reporting period **97**

Estimate of the Potential Hydrocarbon Emissions for each DOR

Using Equation 7-1 form Appendix P Cooling Tower Monitoring

Monthly Sample Location	Monthly Sample Date	a. Water Flow (ml/min)	b. Air Flow (ml/min)	c. Monthly Sample Result (ppm)	M. Molecular Weight of Methane (g/mol)	P. Pressure (Hg)	R. Conversion Factor (ml-atm/mol-K)	T. Stripping Chamber Temp (Deg C)	C. Concentration of air strippable compound (ppmw)	F. Mass Flow Rate of the Cooling Water (gal/min)	Duration of Delay of Repair (hours)	Equation 7-2 Mass Emission rate of VOCs, (lb/hr)	Total Estimated VOC Emissions in the DOR period (lbs)
SCGB-07	1/22/2015	125	2500	4.42	16.04	30.27	82.054	7.30	0.062	208	792	0.0065	5
SCGB-07	2/24/2015	125	2500	17.92	16.04	30.17	82.054	9.70	0.250	208	720	0.0260	19
SCGB-07	3/26/2015	125	2500	15.72	16.04	30.04	82.054	12.10	0.216	208	672	0.0225	15
SCGB-07	4/23/2015	125	2500	3.05	16.04	29.84	82.054	15.80	0.041	208	648	0.0043	3
SCGB-07	5/20/2015												

Total estimated VOC emissions for the reporting period **39**

Notes

Equation 7-1 from Appendix P Cooling Tower Monitoring was used to calculate the concentration of air strippable compound

For equation 7-1 Water flow is constant at 125 (ml/min), Air flow is constant at 2500 (ml/min), Conversion factor is constant at 82.054 (ml-atm/col-K), and Molecular weight of methane is constant at 16.04 (g/mol)

Equation 7-2 from Appendix P Cooling Tower Monitoring was used to calculate the Mass Emission rate of VOCs